

Contents Volume 131

Rhenium in the Black Sea: comparison with molybdenum and uranium D. Colodner, J. Edmond and E. Boyle	1
A new view on the driving mechanism of Milankovitch glaciation cycles H.-S. Liu	17
Chondrule formation, metamorphism, brecciation, an important new primary chondrule group, and the classification of chondrules D.W.G. Sears, H. Shaoxiong and P.H. Benoit	27
Cosmogenic nuclide exposure ages and glacial history of late Quaternary Ross Sea drift in McMurdo Sound, Antarctica E.J. Brook, M.D. Kurz, R.P. Ackert, G. Raisbeck and F. Yiou	41
Temperatures in zones of steady-state underthrusting of young oceanic lithosphere P. Molnar and P. England	57
Rejuvenation of K-Ar systems for minerals in the Taiwan Mountain Belt C.-H. Lo and T.C. Onstott	71
²²⁸ Th/ ²²⁸ Ra ages of a barite-rich chimney from the Endeavour Segment of the Juan de Fuca Ridge A.O. Reyes, W.S. Moore and D.S. Stakes	99
<i>Discussion</i>	
The Neoproterozoic (1000–540 Ma) glacial intervals: No more snowball earth? by Joseph G. Meert and Rob van der Voo Comment by G.E. Williams, P.W. Schmidt and B.J.J. Embleton	115
Reply by J.G. Meert and R. van der Voo	123
First data on trace metal level and behaviour in two major Arctic river–estuarine systems (Ob and Yenisey) and in the adjacent Kara Sea, Russia M.-H. Dai and J.-M. Martin	127
Palaeomagnetic dating and tectonic significance of dolerite intrusions in the Albany Mobile Belt, Western Australia L.B. Harris and Z.-X. Li	143
Excess ⁴⁰ Ar in biotite and hornblende from the Noril'sk 1 intrusion, Siberia: implications for the age of the Siberian Traps P.R. Renne	165
U-Pb dating of a carbonate subaerial exposure event B.L. Winter and C.M. Johnson	177
The decompression of volcanic jets in a crater during explosive volcanic eruptions A.W. Woods and S.M. Bower	189
Geochemical evolution of rift magmas by progressive tapping of a stratified mantle source beneath the Ross Sea Rift, Northern Victoria Land, Antarctica A. Rocholl, M. Stein, M. Molzahn, S.R. Hart and G. Wörner	207
Molecular dynamics simulations of CaCO ₃ melts to mantle pressures and temperatures: implications for carbonatite magmas M.J. Genge, G.D. Price and A.P. Jones	225
Processes of mantle enrichment and magmatic differentiation in the eastern Snake River Plain: Th isotope evidence M.R. Reid	239
The K/T boundary at Beloc (Haiti): Compared stratigraphic distributions of the boundary markers H. Leroux, R. Rocchia, L. Froget, X. Orue-Etxebarria, J.-C. Doukhan and E. Robin	255
Triassic paleomagnetic data from south China and their bearing on the tectonic evolution of the western circum-Pacific region S.A. Gilder, R.S. Coe, H. Wu, G. Kunag, X. Zhao and Q. Wu	269

The correlation between reduction in fission-track diameter and areal track density in volcanic glass shards and its application in dating tephra beds A.S. Sandhu and J.A. Westgate	289
Regionally distinctive sources of depleted MORB: Evidence from trace elements and H ₂ O P. Michael	301
Diapiric basal entrainment of mafic into felsic magma A.R. Cruden, H. Koyi and H. Schmeling	321
Nb-Ta-rich mantle amphiboles and micas: Implications for subduction-related metasomatic trace element fractionations D.A. Ionov and A.W. Hofmann	341
A simple parameterized model of Earth's thermal history with the transition from layered to whole mantle convection S. Honda	357
Correlation of the magnetic susceptibility stratigraphy of Chinese loess and the marine oxygen isotope record: chronological and palaeoclimatic implications J. Bloemendal, X.M. Liu and T.C. Rolph	371
Crystal size variations in Eemian-age ice from the GRIP ice core, Central Greenland T. Thorsteinsson, J. Kipfstuhl, H. Eicken, S.J. Johnsen and K. Fuhrer	381
New observations on mid-plate volcanism and the tectonic history of the Pacific plate, Tahiti to Easter microplate R.C. Searle, J. Francheteau and B. Cornaglia	395
<i>Short Note</i>	
A short note on the Paleocene–Eocene transition in DSDP Hole 550 W. Wei	423
<i>Express Letter</i>	
Chlorine stable isotope composition of the oceanic crust: Implications for Earth's distribution of chlorine A.J. Magenheimer, A.J. Spivack, P.J. Michael and J.M. Gieskes	427
<i>Announcement</i>	433
<i>Author Index Volume 131</i>	434
<i>Contents Volume 131</i>	437

